PURDUE INNOVATES | Office of Technology Commercialization

StoryMakAR: Bringing Stories to Life with an Augmented Reality & Physical Prototyping Toolkit for Youth

This toolkit uses block programming, plug-and-play controls, and low fidelity prototyping with a smartphone app and custom hardware to transform virtual augmented reality ideas into physical products.

Researchers at Purdue University have integrated a new toolkit to teach augmented reality (AR) and computer programming to k-12 students while encouraging skills in technology, communication, collaboration, and creativity through storytelling. Current toolkits involve high fidelity prototyping which is often expensive and creates a steep learning curve for students. The Purdue University approach combines block programming, plug-and-play controls, low fidelity prototyping materials. This setup is compatible with a smart phone application, which allows students to have easier accessibility to software programs. There are two main aspects to StoryMakAR, which are Design MakAR Event MakAR, working together to transform virtual ideas into physical reality. This innovative setup includes off-the-shelf head mounted displays, sensors, custom printed circuit boards, and a variety of 3D printed objects. In testing with fifty-two high schoolers in one-hour sessions, positive feedback was given by teachers and students regarding the overall learning experience with specific regard to creative components.

Advantages:

-Low-cost

-Educational

-Accessible

Potential Applications:

-Youth education

-Prototyping

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Category

Education & EdTech/Immersive & XR Learning Environments

Education & EdTech/Interactive Student Engagement Technologies

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